

In re Appln. of Vander Aa et al.
Application No. 10/068,017

REMARKS

Reconsideration of the above-identified application is respectfully requested in view of the foregoing amendments and the following remarks.

The Pending Claims

Claims 1, 2, and 6-27 are currently pending. Each claim is directed to a method of lithographic printing.

Claims 1, 2 and 6-15, which include the use of hydrophobic thermoplastic polymer particles as described in canceled claim 3, comprise the steps of: (i) unwinding a web of an imaging material from a supply spool, the imaging material comprising (1) a flexible lithographic base having a hydrophilic surface and (2) an image-recording layer comprising the aforesaid particles which is removable in a single-fluid ink or can be rendered removable in a single-fluid ink by exposure to heat or light; (ii) wrapping the imaging material around a cylinder of a printing press; (iii) image-wise exposing the image-recording layer to heat or light; (iv) processing the image-recording layer by supplying single-fluid ink, thereby obtaining a printing master; (v) printing by supplying single-fluid ink to the printing master which is mounted on a plate cylinder of the printing press; and (vi) removing the printing master from the plate cylinder.

New claims 16-27, which include the use of aryldiazosulfonate as described in canceled claim 5, comprise the steps of: (i) unwinding a web of an imaging material from a supply spool, the imaging material comprising (1) a flexible lithographic base having a hydrophilic surface and (2) an image-recording layer comprising aryldiazosulfonate which is removable in a single-fluid ink or can be rendered removable in a single-fluid ink by exposure to light; (ii) wrapping the imaging material around a cylinder of a printing press; (iii) image-wise exposing the image-recording layer to light; (iv) processing the image-recording layer by supplying single-fluid ink, thereby obtaining a printing master; (v) printing by supplying single-fluid ink to the printing master which is mounted on a plate cylinder of the printing press; and (vi) removing the printing master from the plate cylinder.

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Summary of the Office Action

Claims 1, 2, and 6-8, stand rejected under 35 U.S.C. § 103(a) as unpatentable over Teng (i.e., U.S. Patent 6,482,571) in view of Moss (i.e., EP 640,478). Claims 3 and 4 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Teng in view of Moss and Vermeersch '494 (i.e., EP 770,494). Claim 5 stands rejected under 35 U.S.C. § 103(a) as unpatentable over Teng in view of Moss and Vermeersch '128 (i.e., U.S. Patent 5,786,128). Claims 9 and 10 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Teng in view of Moss and Klingman (i.e., U.S. Patent 6,140,392).

Discussion of the Obviousness Rejections

(a) Claims 1, 2, and 6-8 (and the new claims dependent thereon)

The obviousness rejection of claims 1, 2 and 6-8 over Teng et al. in view of Moss et al. is improper in view of the amendment to independent claim 1. Claim 1, as well as those claims dependent thereon (i.e., claims 2 and 6-15) require, *inter alia*, the use of hydrophobic thermoplastic polymer particles as a component of the imaging layer. In contrast, neither Teng nor Moss teach the use of an imaging layer comprised of the claimed hydrophobic thermoplastic polymers. On the contrary, Teng discloses, and teaches, plate imaging technology that is different than that used in the claimed invention. Specifically, Teng teaches the use of polymerizable monomers. *See, e.g., col. 2, ll. 50 & 51.* After the Teng imaging layer is exposed to infrared radiation, the imaging layer becomes insoluble to ink and/or fountain solution due to the polymerization of the monomer or crosslinking to resins (i.e. monomers, oligomers, or polymers). *See, e.g., col. 3, l. 66 to col. 4, l. 9.*

In contrast to Teng, the invention recited in claims 1, 2 and 6-15 utilizes a thermoplastic polymer in its imaging layer that becomes insoluble to the developing solution not by polymerization (as required by Teng), but by undergoing polymer coalescence. Polymer coalescence may be thought of as a softening or melting of the thermoplastic polymer particles under the influence of heat (whether provided by the direct application of thermal energy or by the application of light that is converted into

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thermal energy), wherein the particles coalesce to form an insoluble hydrophobic agglomerate. This technology is distinctly different than the methodology used and taught by Teng.

Moreover, Moss fails to provide the teaching absent from Teng. Indeed, the Office Action implicitly recognizes this by utilizing Moss as teaching the desirability of unwinding an imaging material from a supply spool, wrapping the imaging material around a plate cylinder, and removing the printing master from the plate cylinder by winding the printing master on an uptake spool. *See Office Action, page 3.*

For the foregoing reasons, any rejection of claims 1, 2 and 6-15 based on the asserted combination of Teng and Moss is not well grounded, and should be withdrawn.

An effort to insert Vermeersch '494 into the aforesaid combination to render the claims obvious should be discarded as improper. The technology disclosed in Vermeersch '494 is based on technology that is wholly different from, and incompatible with, that used by Teng, and therefore does not support a combination of the references. Specifically, Vermeersch '494, unlike Teng, uses polymers in its imaging layer, not polymerizable materials, such as monomers (the latter used by Teng). Moreover, there is no teaching or suggestion in Teng itself to use such polymers in its imaging layer. Conversely, there is no teaching or suggestion in Vermeersch '494 to use any polymerizable materials in its imaging layer. In sum, because the two technologies are so different, and there is nothing in the references themselves that would support their combination, an obviousness rejection of claims 1, 2 and 6-15 based on a combination of Teng, Moss and Vermeersch '494 would be improper.

The allowance of claims 1, 2 and 6-15 is respectfully solicited.

(b) Claims 3-5

Claims 3-5 are no longer pending. Applicants will therefore not directly address the rejections entered against these claims. However, the rejections of claims 3-5 are indirectly addressed herein to the extent the subject matter of claims 3-5 is incorporated into other pending claims.

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(c) Claims 9 and 10

Applicants incorporate by reference the arguments in favor of patentability set forth in section (a) above. Withdrawal of the rejection on this basis alone is warranted, and is respectfully requested.

Even assuming that the asserted addition of Klingman into the combination of Teng and Moss is proper, Klingman fails to overcome the deficiencies previously noted in the Teng and Moss references. According to the Office Action, the teaching of Klingman is directed to certain inks. As the teaching relating to ink does not provide the teaching absent from the asserted Teng and Moss combination (as identified above), the combination of Teng, Moss and Klingman, even if proper, would not render claims 9 and 10 obvious.

Withdrawal of the rejection of claims 9 & 10 is respectfully solicited.

(d) Claims 16-27

Independent claim 16, and those claims dependent therein, incorporate the substance of claim 5 by requiring, *inter alia*, an imaging material comprising a non-ablative image-recording layer comprising aryldiazosulfonate that is removable in a single-fluid ink or can be rendered removable in a single-fluid ink by exposure to light.

The asserted combination of Teng, Moss and Vermeersch '128, however, does not render claims 16-27 obvious, for the following reasons.

Teng utilizes a plate technology that is distinct from the technology used in the Vermeersch '128 patent, and in the claimed method. In fact, the Teng technology is not only distinct from, it is fundamentally incompatible with, the Vermeersch '128 plate technology. Thus, there is no basis in the references themselves to support the asserted combination of Teng and Vermeersch '128.

As mentioned previously, Teng uses a thermosensitive layer in the preparation of its negative thermographic printing plate. As part of this plate, Teng requires the use of a layer that is "capable of hardening through polymerization or crosslinking upon exposure to an infrared radiation". Hardening, according to Teng, "is achieved through polymerization or crosslinking of [two] resins." See Teng, col. 3, l. 66 to col. 4, l. 8.

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In stark contrast, Vermeersch '128 teaches the use of technology that is distinct from Teng. Vermeersch '128, unlike Teng, uses fully-formed polymers in its imaging layers to render the imaging layer insoluble. Specifically, the Vermeersch '128 imaging layers include a hydrophilic binder and fully-formed polymers (e.g., aryldiazosulfonates), wherein the hydrophobic binder is "preferably not cross-linked or only slightly cross-linked". See, e.g., *Vermeersch '128*, col. 2, ll. 58-67. The fully-formed polymer of Vermeersch '128 is aryldiazosulfonate, which upon exposure to light, cleaves the sulfonate group, rendering the polymer insoluble. There is, thus, no teaching in Vermeersch '128 to polymerize or cross-link the aryldiazosulfonate polymer. This distinction (use of polymerizable components (Teng) v. use of aryldiazosulfonate polymers (Vermeersch '128)) segregates Teng and the Vermeersch '128 patent into two separate, and incompatible, plate technologies. This incompatibility precludes the combination of these references.

Further, there is no teaching in Teng that imaging layers that do not rely on polymerization would be acceptable in its system. Conversely, there is no suggestion in the Vermeersch '128 reference that the aryldiazosulfonate technology may be abandoned in favor of another technology, such as Teng's polymerization technology. There is simply no basis in the references themselves to support the "swap" of the Vermeersch '128 imaging layer for the imaging layer in Teng as urged in the Office Action. Any obviousness rejection based on this combination of references is unsupportable, and should be withdrawn.

Moreover, there is no teaching in either of the references (assuming they are combinable) of the subject matter described in claims 21, 22 and 27 (i.e., a single-fluid ink).

The Office Action uses (in rejected other claims) Klingman as a source of teaching the single-fluid ink recited in the claims. The Klingman fluid (noted in the Office Action at page 4) is comprised of continuous ink and a non-aqueous polar solvent. However, there is no teaching in Vermeersch '128 that the Klingman fluid would work in the Vermeersch '128 system. In contrast to Klingman, Vermeersch '128 prefers water as a developing fluid. See, e.g., col. 8, ll. 32-38. The use of the Klingman fluid, which is not

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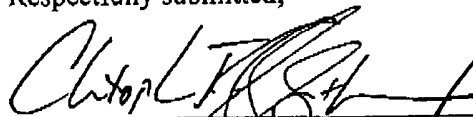
water *per se* (and which would also not be categorized as an aqueous liquid), would directly conflict with the teaching in the Vermeersch '128 patent. Because there is no motivation in the references themselves to use the non-aqueous Kingman fluid in the Vermeersch '128 method, an obviousness rejection entered against claims 21, 22 or 27 on this basis would be improper.

The allowance of claims 16-27 is respectfully solicited.

Conclusion

The application is considered in good and proper form for allowance, and the Examiner is respectfully requested to pass this application to issue. If, in the opinion of the Examiner, a telephone conference would expedite the prosecution of the subject application, the Examiner is invited to call the undersigned attorney.

Respectfully submitted,



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September 4, 2003

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FROM: CHRISTOPHER T. GRIFFITH
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GROUP 2854
UNITED STATES PATENT AND TRADEMARK OFFICE
WASHINGTON, D.C.TELEPHONE NUMBER: 703-308-0982
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IN RE APPLN. OF	VANDER AA ET AL.
APPLICATION NO.	10/068,017
FILED:	FEBRUARY 5, 2002
FOR:	ON-PRESS EXPOSURE AND ON-PRESS PROCESSING OF A LITHOGRAPHIC MATERIAL
GROUP ART UNIT:	2854
EXAMINER:	STEPHEN R. FUNK

RESPONSE TO OFFICE ACTION DATED JUNE 4, 2003 FOLLOWS.

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FORM PTO-1083

PATENT
 Attorney Docket N. 215296
 Dat : September 4, 2003

In re Application of: VANDER Aa et al.

Application No. 10/068,017

Filed: February 5, 2002

For: ON-PRESS EXPOSURE AND ON-PRESS PROCESSING OF A LITHOGRAPHIC MATERIAL

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Sir:

Transmitted herewith is a response to an office action in the subject application.

☐ Applicants claim small entity status of this application under 37 CFR 1.27.☒ Petition for Extension of Time☐ Applicants petition for a one-month extension of time under 37 CFR 1.136, the fee for which is \$110.00 (enclosed).☒ Applicants believe that no petition for an extension of time is necessary. However, to the extent that such petition is deemed necessary, Applicants hereby petition for a sufficient extension of time to render the present submission timely. Please charge Deposit Account No. 12-1216 for the appropriate petition fee.☐ No additional claim fee is required.☐ Other:

The claim fee has been calculated as shown below:

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					SMALL ENTITY		OTHER THAN A SMALL ENTITY	
	CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	EXTRA CLAIMS PRESENT	RATE	ADDITIONAL CLAIM FEE	RATE	ADDITIONAL CLAIM FEE
TOTAL	24	MINUS	20	=4	x 9=	\$	x 18=	\$72.00
INDEPENDENT	2	MINUS	3	=0	x 42=	\$	x 84=	\$0.00
<input type="checkbox"/>	FIRST PRESENTATION OF MULTIPLE CLAIM				+ 140=	\$	+ 280=	\$0.00
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Respectfully submitted,
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By

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Amendment or ROA Transmittal (Revised 8/1/03)